

REMARKS

After entry of this amendment, claims 1, 6, 11-12, 18, 21, 24-29 and 34-45 will be pending. Support for new claims 34-45 is found in the application. No new matter has been added. Applicants respectfully request reconsideration of all remaining claims in view of the remarks set forth below.

Allowable Subject Matter

Applicants kindly thank the Examiner for the indication of the allowability of claim 24. Applicants also thank the Examiner for the withdrawal of the previous rejections under 35 U.S.C. §103(a) over McPherson et al. (U.S. Patent 6,013,855) in view of Goldberg et al. (U.S. Patent 5,804,263) for claims 1, 6, 11-12, and 18.

Rejection of claims 1, 6, 11-12 and 18 under 35 U.S.C. §102(b)

The Examiner rejected claims 1, 6, 11-12 and 18 under 35 U.S.C. §102(b) as anticipated by Goldberg et al. (U.S. Patent 5,804,263). The Examiner states, citing to the portions of the reference at Col. 5, lines 7-10, that Goldberg uses a gamma beam radiation polymerization surface modification to produce a grafted polymeric surface. The Examiner states that the grafted polymeric surface of Goldberg anticipates the presently claimed invention. Applicants respectfully traverse the rejection.

Applicants respectfully submit that independent claim 1 cites features not taught or suggested by the cited Art. To anticipate a claim, each and every claimed element must be found in the cited reference. MPEP § 2131.¹ Reviewing Goldberg, it is clear that this reference fails to disclose each and every element of the rejected claims. Instead, Goldberg could only arguably disclose grafting material on a polymer substrate, and nothing more. It cannot and does not teach an activated modular grafted polymeric surface. *See* language of Claim 1. This is especially true in light of the motivation behind Goldberg, which is to provide a surface that does not adhere to biomaterial. (See column 1, lines 15-40 of Goldberg). In fact, Goldberg never even discusses using its disclosed technology as a support for an active species in a chemical reaction.

Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053

Alternatively, independent claim 1 has been amended to specifically recite features not disclosed in Goldberg, including among them, one or more modular physical units comprised of a first polymer or derivative, blend or co-polymer thereof, a second polymer grafted to the first polymer by graft polymerization, and at least one activating moiety bound to the second polymer. Because Goldberg does not anticipate claim 1 as amended, Applicants respectfully request that the rejection of claims 1 and its dependent claims 6, 11-12, and 18 be withdrawn.

Rejection of claims 1 and 6 under 35 U.S.C. §102(e)

The Examiner rejected claims 1 and 6 under 35 USC § 102(e) as being anticipated by McPherson et al. (U.S. Patent No. 6,013,855). The Examiner stated that McPherson et al. discloses a grafted polymeric surface (abstract; col. 4, lines 9-44); the process of gamma beam radiation induced polymerization surface modification is used to produce the grafted surface (col. 4, lines 24-27); the surface includes metals and glasses (col. 5, lines 51-55); the grafted polymer includes polyacrylic acid (col. 6, lines 52-56); and the grafted polymer surface is biocompatible in which enzymes can be immobilized (col. 4, lines 22-23). Applicants respectfully traverse the rejection.

Applicants respectfully submit that independent claim 1 cites features not taught or suggested by the cited Art. To anticipate a claim, each and every claimed element must be found in the cited reference. MPEP § 2131. McPherson fails to teach or suggest providing a modular support surface. In fact, McPherson fails to provide any description of any alleged support surface whatsoever. Applicants respectfully disagree with the Examiner's citation to the Abstract and Col. 1, lines 14-16, for the proposition that McPherson teaches a modular surface since such a teaching is completely absent from those citations. For clarification of the record and in accordance with MPEP procedure, Applicants kindly request the Examiner to state where in the reference each of the claimed limitations may be found and what claims are deemed anticipated. *In re Yates*, 663 F.2d 1054, 1057, 211 USPQ 1149, 1151 (CCPA 1981). See also *Ex parte Schricker*, 56 USPQ2d 1723, 1725 (BPAI) (unpublished) (the burden is on the Examiner to show where each of the claimed limitations are found in the prior art).

McPherson in fact teaches away from the activated modular grafted polymeric surface of the invention, for example, by describing the invention of McPherson as one to “improve the biocompatibility of devices...” (Col. 11, lines 4-6). In that regard, McPherson teaches at best in the context of improving “surface modification of biomaterials with ...surface-passivating molecules...” in order to decrease bioreactivity (E.g., Col. 2, lines 65-68). Thus, McPherson teaches a material that resists interaction with any biomaterial. Such material, for obvious reasons, would not work as a support for a material in a reaction.

In contrast, the activated grafted modular polymeric surface of the present invention is comprised of activating moieties that are supported by the polymeric surface and assist the reaction process. Moreover, the polymeric surface is not just any surface, and is instead a modular surface. Such surfaces may include, without limitation, gears, beads, etc. These modular surfaces further lend themselves to assisting and contributing to reactions by positioning the activating moieties at desired locations within the reaction environment or allowing ease of handling of the active agents. McPherson fails to disclose any device, especially a modular polymeric device, for supporting an active species. In fact, by virtue of McPherson’s teaching toward biocompatibility, it actually teaches away from such a device.

Alternatively, independent claim 1 has been amended to specifically recite features not disclosed in McPherson, including among them, one or more modular physical units comprised of a first polymer or derivative, blend or co-polymer thereof, a second polymer grafted to the first polymer by graft polymerization, and at least one activating moiety bound to the second polymer. Because McPherson does not anticipate claim 1 as amended, Applicants respectfully request that the rejection of claim 1 and its dependent claim 6 be withdrawn.

Rejection of claims 1 and 25-29 under 35 U.S.C. §103(a)

The Examiner rejected claims 1 and 25-29 under 35 USC § 103(a) as being obvious over McPherson et al. (U.S. Patent No. 6,013,855) in view of Lukhtanov et al. (U.S. Patent No. 6,339,147). The Examiner’s comments concerning McPherson are described above and are not repeated herein. Concerning Lukhtanov, the Examiner stated that the reference discloses a Schiff base type covalent linkage that covalently links an oligonucleotide to a solid support (col. 3, lines 38-41.) Applicants respectfully traverse the rejection.

Applicants respectfully submit that McPherson and Lukhtanov do not teach or motivate the combination of the claimed features of independent claim 1 or its dependent claims 25-29. Applicants' comments above concerning the deficiencies of the McPherson reference are incorporated and apply equally against the rejections under Section 103. Lukhtanov fails to remedy these deficiencies, for example, it also does not disclose an activated grafted modular polymeric surface. Accordingly, for the reasons set forth above, Applicants submit that claims 1 and 25-29 are in a condition for allowance.

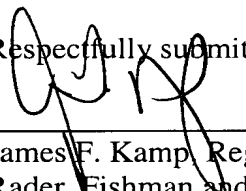
CONCLUSION

For at least these reasons, Applicants believe that the application is now in condition for allowance. It is believed that any additional fees due with respect to this paper have already been identified in any transmittal accompanying this paper.

However, if any additional fees are required in connection with the filing of this paper that are not identified in any accompanying transmittal, permission is given to charge account number 18-0013 in the name of Rader, Fishman and Grauer PLLC.

If the Examiner has any questions or comments, she is kindly urged to call the undersigned to facilitate prosecution.

Respectfully submitted,



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